

Straw Paper Helicopter

Describes how to perform 100 experiments with paper and other materials easily found in the home, exploring such topics as air, chemistry, electricity, magnetism, heat, light, inertia, sound, and water.

Smash It! Crash It! Launch It! 50 Mind-Blowing, Eye-Popping Science Experiments Sterling Publishing Company, Inc.

Author and delightfully mad scientist Cy Tymony combines the fun of his Sneaky Uses series with a host of fascinating science facts and resourceful tricks in Sneaky Science Tricks, a uniquely entertaining and educational how-to guide for the sly and curious among us. This time, Tymony has concocted an ingenious bag of tricks that includes a helicopter, a hand-powered fan, a clever moon direction trick, and many, many other shrewd navigation tools and tons of sneaky trivia on plants and animals, geography, and physics. Each nifty project in the book comes complete with detailed, easy-to-follow instructions and illustrations that fully demonstrate the step-by-step process, making Sneaky Science Tricks an ideal guidebook for sneaky scientists of all ages.

Through My Eyes, the first of three memoirs, describes Johns childhood in a working class community in SW England, , and its impact on his lifetime work as a teacher of children and teacher of teachers. John began his career in the swinging 60s, teaching in Leicestershire, then the leading light in progressive education. Perceived to be a successful and effective teacher, he quickly moved out of the classroom, joining the Leicestershire Advisory team, with a brief to support the classroom development of hands-on science activity. Converting an old one-teacher village school, John created Foxton Field Study Center, inviting teachers and students to visit for hands-on activity. In the mid 1960s, his work in the field of science soon came to the notice of American educators, and John was invited to run several science workshops for teachers in various parts of the U.S. In 1970, he joined Professor David Hawkins at CU Boulder, when David opened the Mountain View Center for Environmental Education, a base for teachers wanting to do more and more hands-on science with their students.

Science Art and Drawing Games for Kids

An experiment for every day of the year

Choosing and Using the Best Instructional Materials for Your Students

Who Says You Can't Teach Science?

I Am! I Can!

The Highlights Book of Things to Do

Brownie Girl Scout Handbook

Periscopes, barometers, and pinhole cameras are just three of the many contraptions that young inventors will learn to make through this engaging book. Using household items like cardboard boxes, newspapers, and aluminum foil, readers will create amazing devices that demonstrate scientific concepts. Easy-to-follow instructions and helpful diagrams guide readers through each project.

There is always time to conduct science experiments, because science never sleeps! 365 Weird & Wonderful Science Experiments gives you a full year of kid-friendly experiments to try alone or supervised. This fact- and fun-filled book of science includes hundreds of simple, kid-tested science experiments. All of which can be done with items from around the house, and require little to no supervision! Whether you're making your own slime, rockets, crystals, and hovercrafts or performing magic (science!) tricks and using science to become a secret agent, this book has something for every type of curious kid. Each experiment features safety precautions, materials needed, step-by-step instructions with illustrations, fun facts, and further explorations. With 365 Weird & Wonderful Science Experiments you will: Create a drinkable rainbow Make a bowling ball float Capture a cloud Build furniture out of newspapers Blow bouncing bubbles that don't burst Plus 360 other weird and wonderful experiments. Engaging, encouraging, and inspiring, 365 Weird & Wonderful Science Experiments is every budding scientist's go-to, hands-on guide for learning the fundamentals of science and exploring the fascinating world around them, just like a real scientist.

How to engineer change in your elementary science classroom With the Next Generation Science Standards, your students won't just be scientists—they'll be engineers. But you don't need to reinvent the wheel. Seamlessly weave engineering and technology concepts into your PreK-5 math and science lessons with this collection of time-tested engineering curricula for science classrooms. Features include: A handy table that leads you straight to the chapters you need In-depth commentaries and illustrative examples A vivid picture of each curriculum, its learning goals, and how it addresses the NGSS More information on the integration of engineering and technology into elementary science education

Twenty science activities to be used by parents and teachers with children as supplements to classroom science curricula.

The Go-To Guide for Engineering Curricula, PreK-5

Linking Fiction to Nonfiction

Kid Concoctions and Contraptions

Full-scale Investigation on the Blade Motion of the PV-2 Helicopter Rotor

20th Century Wars

Discover How Nature Inspires Human Designs With 25 Projects

Crazy Contraptions

Describes the history and programs of the Girl Scouts and presents year-round activities for Brownies.

Make a fish out of onion skins, craft a beheaded alien cake, or create your own erupting volcano. Every project in The Grossology Handbook is tried and tested. The recipes and projects use simple, everyday materials and have clear step-by-step instructions to help you get the most of your gross-out experience. Smart "Fact Files" and "Think About It" boxes introduce fun facts and explain

the educational value behind each experiment and activity. Freaky, fascinating, and fun! Included within are sections on: Slimy Science and Awesome Experiments Gruesome Grub and Disgusting Dishes Dinosaur Dishes and Fossil Food Astonishing Art and Recycled Garbage Mad Machines and Dotty Devices Cool Circuits and Wicked Wires Featured within are vibrant, full-color illustrations on every page. Get ready to get totally grossed out with this incredibly fun and entertaining book—it's perfect for any kid! Weaving a variety of activities into each Firelight session is easy when you have the right resources. And you don't have to be an expert in art, drama, or computers to do it effectively. These books provide great background for deeper learning and plenty of ideas.

Provides instructions for 200 experiments in biology, chemistry, physics, earth science, and astronomy.

Great Things to Do Outside

To Pop, Spin, Whirl & Fly

Flying Magazine

Totally Gross Experiments and Activities

Build and Launch 35 Rockets, Gliders, Helicopters, Boomerangs, and More

101 Brilliant Things For Kids to do With Science

Pocket Guide to Boy Stuff

Science Art and Drawing Games for Kids is a collection of 40+ activities that teach/demonstrate science concepts through art, crafts, and other fun hands-on projects.

Provides instructions for performing often messy science experiments along with an explanation of how each works.

Educational resource for teachers, parents and kids!

An experimental investigation of the PV-2 helicopter rotor has been conducted at the Langley Laboratory of the National Advisory Committee for Aeronautics to determine the basic characteristics of a fully articulated rotor.

Cardboard Box Engineering

Janice VanCleave's 200 Goopy, Slippery, Slimy, Weird and Fun Experiments

35+ Fun Art Projects to Build Amazing Science Skills

66 Gruesome STEAM Science and Art Activities

The Contribution of Professional Societies

On Becoming a Teacher

Science Fair Warm-up

Cardboard is everywhere! For creative kids aged 9 to 14, it's the perfect eco-friendly building material, and Cardboard Box Engineering is the perfect guide to get them started on inventive tinkering. A working kaleidoscope, a marble roller coaster, a robotic hand, and a wind-powered tractor with cardboard gears are just some of the ingenious projects developed by Jonathan Adolph, author of the best-selling Mason Jar Science. Working with simple household tools, kids can follow the step-by-step photographic instructions to exercise their design smarts, expand their 3-D thinking, and learn the basics of physics and engineering with activities that have real-life applications.

Encourage students to take an in-depth view of the people and events of specific eras of American history. Nonfiction reading comprehension is emphasized along with research, writing, critical thinking, working with maps, and more. Most titles include a Readers Theater.

Learn how to think like a scientist and discover the skills it takes to bring scientific theories and practical experiments together at home. Maker Lab Outdoors takes kids on a journey to better understand the world of science that will keep the whole family curiously experimenting for hours. Everything around your household is an apparatus. Maker Lab Outdoors book teaches your aspiring scientist how to use common household items to conduct dozens of mind-blowing science experiments. The book displays rich visual illustrations, easy to follow step-by-step instructions and rigorous attention to detail. It also contains activities that can be enjoyed by the whole family. Each science activity has a clear how it works explanation, revealing the fascinating science behind the experiments, along with real-world examples. The best way to learn is to have fun. This easy to read and understand book about science contains facts and experiments suitable for young aspiring scientists. Learn The Science Behind Every Experiment Play pretend your favorite scientist or become one at home. Maker Lab Outdoors takes you on a step-by-step guide on how to do sensational science experiments like creating enormous bubbles, explore freeze-thaw action and constructing a compass using everyday materials in the great outdoors. This book will inspire you to start conducting your own experiments and exploring the principles of science. This interactive science book supports STEM education initiatives, a must have for every young scientist curious about their surroundings. Written by Author Robert Winston, a world-renowned scientist who has combined ground-breaking academic work with an ability to communicate ideas in a method of general understanding. Maker Lab Outdoors explores the science of: - Earth and Sky - Water Power - Nature Watch - World of Weather - Space - And more Maker Lab Outdoors: 25 Super Cool Projects features twenty-five science projects and experiments to be done outside using common household items, sparking kids' creativity

and helping them develop science skills through hands-on learning.

Illustrated, step-by-step instructions for making a variety of playthings out of paper and other simple materials. Includes such objects as paper airplanes, noisemakers, boomerangs, pinwheels, and others.

Weird & Wonderful Science Experiments Volume 3: Build It

25 Super Cool Projects

Engineering Education through Social Innovation

Step-by-step Science Activity Projects from the Smithsonian Institution

Cool, Inventive Projects for Tinkerers, Makers & Future Scientists

Instant Paper Toys

The Flying Machine Book

The Highlights Book of Things to Do is the essential book of pure creativity and inspiration. Kids ages seven and up will find hundreds of ways to build, play, experiment, craft, cook, dream, think, and become outstanding citizens of the world. This highly visual, hands-on activity book shows kids some of the best ways to do great things--from practicing the lost arts of knot-tying, building campfires, connecting circuits, playing jump rope, drawing maps, and writing letters, to learning how to empower themselves socially, emotionally, and in their communities. The final chapter, Do Great Things, inspires kids become caring individuals, confident problem solvers, and thoughtful people who can change the world. Full List of Chapters: Things to Do Inside Things to Do Outside Science Experiments to Do Things to Build Things to Do with Your Brain Things to Do in the Kitchen Things to Draw Things to Write Things to Do with Color Things to Do with Paper More Things to Do with Recycled Materials Do Great Things National Parenting Seal of Approval Winner, National Parenting Product Award (NAPPA) Winner, Mom's Choice Award, Gold Provides instructions for creating science-themed crafts and performing simple science experiments.

In Bioengineering: Discover How Nature Inspires Human Designs, young readers explore designs and innovations that come from nature. Leonardo da Vinci studied birds' wings to draw his design of a man-made flying machine and engineers still look to birds when attempting to make planes more aerodynamic. And a burr on your shirt from walking through a field sticks like Velcro, doesn't it? The plant and animal world provides engineers and scientists with a host of ideas to apply to the human world to make it a better place to live. Bioengineering explores different fields, including communication, transportation, and construction, and follows the process of engineering from the raw material of the natural world to the products we use in the human world every day. Activities such as building cantilevers and inventing a new fabric that mimics pinecone behavior require kids to think critically about their own needs and find creative ideas to fulfill those needs using designs from nature.

Essential questions and links to digital and primary resources make this book an engaging and illuminating experience.

With Great Things to Do Outside, children will never be out of ideas for things to do. Made up of fun, practical projects to do outside, this book is guaranteed to get kids out into nature. Activities range from simple observation in the backyard to more ambitious projects. Great Things to Do Outside will open the whole family's eyes to the nature on their doorstep. Key features: -Contains 365 outdoor activities, enough for a whole year. -Activities only use readily available materials, such as paper, pen, sand, and soil--and are set out with clear step-by-step instructions. -Encourages children to observe and interact with nature, independently or with the whole family, wherever in the world they are.

Perform Sneaky Mind-Over-Matter, Levitate Your Favorite Photos, Use Water to Detect Your Elevation, Navigate with Sneaky Observation Tricks, and Turn a Cereal Box into A Collapsible Robot with Everyday Things

Maker Lab: Outdoors

365 Weird & Wonderful Science Experiments

Fires and Floods

Smash It! Crash It! Launch It!

Rainy, Windy, Snowy, Sunny Days

Bioengineering

Collects twenty bug related science experiments, including figuring out what color a butterfly favors and trying to make an ant get lost.

Calling all future Amelia Earharts and Chuck Yeagers--there's more than one way to get off the ground. Author and physics teacher Bobby Mercer will show readers 35 easy-to-build and fun-to-fly contraptions that can be used indoors or out. Better still, each of these rockets, gliders, boomerangs, launchers, and helicopters are constructed for little or no cost using recycled materials. The Flying Machine Book will show readers how to turn rubber bands, paper clips, straws, plastic bottles, and index cards into amazing, gravity-defying flyers. Learn how to turn a drinking straw, rubber band, and index card into a Straw Rocket, or convert a paper towel tube into a Grape Bazooka. Empty water bottles can be transformed into Plastic Zippers and Bottle Rockets, and ordinary paper can be cut and folded to make a Fingerrangs--a small boomerang--or a Maple Key Helicopter. Each project contains a material list and detailed step-by-step instructions with photos. Mercer also includes explanations of the science behind each flyer, including concepts such as lift, thrust, and drag, the Bernoulli effect, and more. Readers can use this information to modify and improve their flyers, or explain to their teachers why throwing a paper airplane is a mini science lesson. Bobby Mercer has been sharing the fun of free flight for over two decades as a high

school physics teacher. He is the author of several books and lives with his family outside of Asheville, North Carolina.

From bestselling kids' activity author Dawn Isaac comes this exciting new volume full of creative (and occasionally outrageous) ideas for budding young scientists. Whether your child is crazy about chemistry or bananas about biology (or, let's face it, just likes making a mess), this book is choc-a-block full of experiments and projects that will get kids really excited about science - and all without going anywhere near a TV, tablet or computer screen. Whether they want to Launch a Rocket, Blow a Square Bubble, Discover their own DNA or Build a Balloon Powered Racing Car, there's a whole wealth of fun suggestions to keep kids amused - and you never know, they might even learn something along the way.

Even science fair enthusiasts may dread grappling with these two questions: 1. How can you organise many middle school students doing many different projects at the same time? 2. How can you help students while giving them the freedom of choice and independence of thought that come with genuine inquiry? Answer the questions--and face science fairs without fear--with the help of this book from the Science Fair Warm-Up series. This book, for grades 5-8, is particularly suited for those students who have not participated in a science fair before, as it lays a foundation for the ideas developed in the later books about the practices of scientists. Even students who have experienced science fairs will find many ideas about scientific practices that are new to them. In addition to offering original investigations, the book provides problem-solving exercises to help students develop the inquiry skills to carry the projects through. To save you time, the materials are organised to grow more challenging and encourage independent study as students progress through the grade levels. To help you meet your teaching goals, the series is based on the constructivist view that makes students responsible for their own learning and aligns with national standards and the new Framework for K-12 Science Education. Science Fair Warm-Up will prepare both you and your students for science fair success. But even if you don't have a science fair in your future, the material can help make your students more proficient with scientific research.

Learning the Practice of Scientists. Grades 5-8

Bug Science

Children's Island

Discover, Explore, Create, and Do Great Things

Build Rockets and Racers and Test Energy and Forces!

250 Boredom Busters - Fun Ideas for Games, Crafts, and Challenges

Includes instructions for creating such objects as phony spills, movie glass candy, pocket rockets, and rain paint, using items found around the home like corn syrup, cornstarch, food coloring, and gelatin.

Examines how communities are working to minimize the damage caused by fires and floods.

"The whole world is a laboratory, and with 80+ safe and fun experiments and activities, this is the ultimate lab book for kids."--

Here are over fifty fantastically fun projects that use easy-to-find everyday materials. Make things that fly, fling, spin, swim, whoosh, zoom and ooze, and discover the surprising science behind them.

Sneaky Science Tricks

50 Mind-Blowing, Eye-Popping Science Experiments

Science, Kids, and Christian Education

Through My Eyes

Games, Puzzles, and Toys

100 Science Experiments with Paper

From the Smithsonian Institution

Presents a summary of popular children's literature and nonfiction books related to weather subjects

Suggests experiments involving bubbles, rockets, boats, paper airplanes, and parachutes

Convincing his mother that he has gone to Children's Island, a summer camp, Reine Larsson, a ten-year-old, is determined to get by on his own resources in Stockholm for the summer

First he taught boys all about mischief and perfecting their shenanigans again a nemesis. Next it was how to play games-without the help of a video-game controller. Now Bart King introduces them to all the important stuff they need to know but adults don't want to tell them. From girls and cooties to flying gadgets and gross stuff, Bart explains it all. Invaluable lessons include: The magical powers of duct tape! How to "gluggle"--juggle underwater! The awesome art of making faces! Speaking like a pirate! And other cool stuff we can't even mention here! With its handy little size, Pocket Guide to Boy Stuff can go everywhere boys do.

20 Projects and Experiments about Arthropods : Insects, Arachnids, Algae, Worms, and Other Small Creatures

More Science Activities

Unlock Your Imagination

A Preschool Curriculum

Big Book of Science Things to Make and Do

The Big Book of Boy Stuff

The Usborne Big Book of Science Things to Make and Do

This book explores the nexus between professional technical societies and engineering education by examining several societies' efforts to promote and support engineering and engineering education in the areas of pre-university education, university education and informal education through programs and activities designed to leverage social innovation. Professional societies are in a unique position to support and contribute to engineering education, and have dedicated substantial resources to social responsibility programs and activities that promote engineers and engineering. The book is chiefly intended for engineers, engineering educators, staff members of professional technical societies, and for the broad range of scholars whose work involves technology education and education policy.

After Bart King interviewed hundreds of the wisest guys and smartest alecks for The Big Book of Boy Stuff, something awesome happened: the book became a classic! Hailed by critics and kids alike, it has sold hundreds of thousands of copies, and even won awards. In this updated and redesigned tenth anniversary edition, hijinks and hilarity are still front and center. Within these pages, boys can find a myriad of things to do, things to laugh at, and things they didn't know. Bart King, the veteran of many water balloon wars, taught middle school for many years. He's written other cool books, including The Big Book of Superheroes, The Pocket Guide to Girl Stuff, and The Big Book of Gross Stuff. Visit his website at www.bartking.net.

This exciting activity book for kids has over 250 ideas to keep them entertained and screen-free! Includes everything you need to play checkers, chess, and more! Way more. Whether it's a rainy day or a sunny afternoon, you'll find plenty to make, play, and do. There's something in it for everyone. A good balance of creative and outdoor activities in one huge illustrated guide with board games included. With everything from writing a story to creating your own obstacle course or making paper airplanes to recycling, you'll be hard-pressed to find a child who can't find something to enjoy in this kids ebook. Packed with fun facts and rainy (or not so rainy) day activities, it's the perfect boredom buster for screen-free, on-the-go entertainment, nurturing children's natural curiosity and imagination. While there are activities that might require purchasing some craft supplies, plenty only requires your imagination or things that you can find around the house or garden. What's great is that it's designed to encourage children to put their own spin on anything they try in some way or another. What sets this educational book apart is the box at the back with everything you need to play checkers, chess, and snakes-and-ladders. The playing pieces are made from card, and you get to build the dice yourself. Some activities require an adult to join in on the fun, but overall, it gives a lot of freedom and gender-neutral fun. Get creative and even dramatic to build confidence and bust boredom in many different ways. Never Be Bored Again! This ebook contains more than 250 awesome things for you to make and do. Put down your electronic device and unleash the power of your brain with challenges, crafts, creative learning, and oh-so-many cool games for kids. Put on a play - write the script, make props, and more. Play some of the cool road trip games like I-Spy and storytelling. Perform magic tricks, write a song, discover all the different games you can play with a frisbee. The list goes on! With so many fun activities for kids to try, here is a small taste of what you'll get up to: - Write a story - Make a bee hotel - Create an obstacle course - Learn some super cool illusions - Invent a board game of your own design - And much, much more!